UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,249	01/13/2005	Carles Ruiz Floriach	US020064US	9009

24737 7590 12/28/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
ELPENORD, CANDAL	
ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,249	RUIZ FLORIACH ET AL.	
	Examiner	Art Unit	
	Candal Elpenord	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *13 January 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Abstract Objection

1. The abstract of the disclosure is objected to because the phrase "are provided" is improper language. Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

3. The drawings are objected to because the blocks in figure 1-8 should be labeled with descriptive legends. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several

views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1, 29, 9, 17** are rejected under 35 U.S.C. 102(e) as being anticipated by Meggers et al (US 6,728,270 B1).

Regarding claim 1, a method ("method for scheduling and admission controlling of real-time data", recited in abstract, lines 1-10) comprising: providing a series of information portions (fig. 5, Incoming packet Stream, recited in col. 12, lines 21-36) to a transmitter ("data packets that admitted sent to packet scheduler", recited in col. 10, lines 52-62-the scheduler plays the role of the transmitter), the information portions ("delivery time for each payload data packet", recited in col. 12, lines 21-36) having critical times ("time stamp and delivery deadline", recited in col. 11, lines 57-67 and col. 12, lines 1-7) when they need to be available to a receiver ("provide away for processing to EDF queue with delivery deadline", recited in col. 11, lines 57 –col. 12, lines 7); estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) whether the information portions ("decision means for real-time processing of incoming traffic flow", recited in col. 4, lines 27-38) can be transmitted by the transmitter ("data packets that admitted sent to packet scheduler", recited in col. 10, lines 52-62-the scheduler plays the role of the transmitter), in time to be made available to the receiver ("received at network node", recited in col. 6, lines 29-37, "EDF queue", recited in col. 11, lines 57-66) before the critical time ("delivery deadline at the output queue and allowed delivery deadline", recited in col. 12, lines 21-55); and transmitting ("transfer unit to transmit packet that admitted", recited in col. 4, lines 39-45) the information portions ("sub-stream of data packets", recited in col. 11, lines 57-66) to the receiver ("EDF queue", recited in col. 11, lines 57-

66) depending on the estimating ("calculated delivery time", recited in col. 12, lines 51-55).

Regarding claim 29, a transmitter ("data packets that admitted sent to packet scheduler", recited in col. 10, lines 52-62-packet scheduler plays the role of the transmitter) for transmitting information portions ("sub-stream of data packets", recited in col. 10, lines 52-62) to a receiver ("output interface and EDF queue", recited in col. 3, lines 53-60), comprising: means for providing ("admission of data packets of a substream", recited in col. 10, lines 53-62) a series of information portions (fig. 1c, "insertion of data packets into a stream", recited in col. 7, lines 6-12) that need be available to the receiver ("destination entity", recited in col. 8, lines 7-24) at critical times ("time at which the data has to reach it destination", recited in col. 8, lines 7-24); means for estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) whether the information portions ("decision means for real-time processing of incoming traffic flow", recited in col. 4, lines 27-38) can be transmitted by the transmitter ("data packets that admitted sent to packet scheduler", recited in col. 10, lines 52-62) in time to be made available to the receiver ("destination entity", recited in col. 8, lines 7-24) before the critical time ("delivery deadline at the output queue and allowed delivery deadline", recited in col. 12, lines 21-55); and transmitting apparatus ("transfer unit to transmit packet that admitted", recited in col. 4, lines 39-45) to transmit the information portions ("sub-stream of data packets", recited in col. 11, lines 57-66) to the receiver ("received at network node", recited in col.

6, lines 29-37 "EDF queue", recited in col. 11, lines 57-66) depending on the estimating ("calculated delivery time", recited in col. 12, lines 51-55).

Regarding claim 9, the method ("method for scheduling and admission controlling of real-time data", recited in abstract, lines 1-10), wherein the estimating (calculated delivery deadlines", recited in col. 12, lines 37-50) depends on a buffering limit ("buffer limitations" recited in col. 9, lines 37-42) of the receiver ("receiver's site", recited in col. 9, lines 37-42).

Regarding claim 17, Meggers et al. discloses the method ("method for scheduling and admission controlling of real-time data", recited in abstract, lines 1-10), wherein the estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) depends on the maximum size "maximum available throughput", recited in col. 10, lines 24-39) on a information portions ("substream", recited in col. 10, lines 39-53)

7. **Claims 2, 5, 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meggers et al (US 6,728,270 B1). In view of Cash et al (US 5,481,312).

Regarding claims 2, 5, 24, Meggers et al. discloses the method as described in above paragraph. However, Meggers is silent with respect to the following features: **regarding claim 2**, the method, wherein the information portions are packets of media frame portions for a multimedia presentation, the presentation including multiple frame portions each frame portion including multiple high priority packets and multiple low priority packets, **regarding claim 5**, the method of claim 1, wherein providing the

information portions includes separating information into information portions having different priorities, **regarding claim 24**, The method of claim 1, wherein the method further comprises receiving a request from the receiver to initiate transmitting the information portions to the receiver.

However, Cash et al. in a similar filed of endeavor discloses the following features: **regarding claim 2**, the method ("method for transmitting video stream from a transmitter with low and high priority segments", recited in col. 1, lines 40-48), wherein the information portions ("high and low priority data segments", recited in col. 5, lines 25-53) are packets ("packets of high and low priority", recited in col. 7, lines 1-9) of media frame portions (fig. 6, I, P and B frame portions, recited in col. 5, lines 9-20) for a multimedia presentation ("displayed to the client monitor", recited in col. 3, lines 7-42, fig. 2, Client Monitor 225 and Decoder 224, recited in col. 3, lines 7-42) the presentation including multiple frame portions (fig. 6, I, P and B frame portions, recited in col. 5, lines 9-20) each frame portion (fig. 3, frame portions with priorities, recited in col. 4, lines 8-29) including multiple high priority packets ("packets of high and low priority", recited in col. 7, lines 1-9) and multiple low priority packets ("packets of high and low priority", recited in col. 7, lines 1-9), **regarding claim 5**, the method ("method for transmitting video stream from a transmitter with low and high priority segments", recited in col. 1, lines 40-48), wherein providing the information portions ("transmission of segments with high and low priority", recited in abstract, lines 1-13) includes separating ("separation", recited in col. 46-54) information (fig. 6, frame separation, recited in col. 5, lines 9-20) into information portions ("partitions", recited in col. 3, lines 54-65) having different

priorities ("high and low priority partitions", recited in col. 3, lines 54-65) **regarding claim 24**, The method ("method for transmitting video stream from a transmitter with low and high priority segments", recited in col. 1, lines 40-48), wherein the method ("method for transmitting video stream from a transmitter with low and high priority segments", recited in col. 1, lines 40-48) further comprises receiving a request ("transmitting requested segments to the client", recited in col. 4, lines 35-46) from the receiver (fig. 2, Client 220, recited in col. 3, lines 7-19) to initiate transmitting ("transmitting requested segments to the client", recited in col. 4, lines 35-46) the information portions ("transmit of partitions", recited in col. 4, lines 35-46) to the receiver (fig. 2, Client 220, recited in col. 3, lines 7-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Meggers et al. by using features as taught by Cash et al. in order to provide differential distribution of multimedia stream (See col. 1, lines 40-62 for motivation).

8. **Claims 18, 21-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meggers et al (US 6,728,270 B1) in view of Fukushima et al (US 6,918,077 B2).

Meggers et al. discloses the method as described in above paragraphs. However, Meggers et al. is silent with regard to the following features: **regarding claim 18,** the method, wherein the transmission includes retransmitting information portions until a predetermined limit on the number of retransmissions is reached or an acknowledgement is received from the receiver that the portion has been successfully received without any uncorrectable errors, and the estimating depends on the

retransmission limit, **regarding claims 21,** the method, wherein transmitting the information portions depends on whether previous information portions were successfully transmitted, **regarding claims 22** the method, wherein the information portions have different priorities and transmitting the information portions depends on whether previous information portions with the same or higher priority were successfully transmitted, **regarding claim 24**, the method, wherein the method further comprising receiving a request from the receiver to initiate transmitting the information portions to the receiver.

However, Fukushima et al. in a similar field of endeavor discloses the following features: **regarding claim 18**, the method ("provide data transmission of real-time", col. 2, lines 14-18), wherein the transmission (fig. 1, Transmission unit 13, recited in col. 14, lines 66- col. 15, lines 9) includes retransmitting information portions (fig. 1a, Retransmission Decision Unit 16, recited in col. 15, , lines 18-34) until a predetermined limit ("retransmission count", recited in col. 25, lines 30-48) on the number of retransmissions ("retransmission times", recited in col. 14, lines 35-42) is reached or an acknowledgement is received (""retransmission request", recited in col. 17, lines 3-19) from the receiver (fig. 2, Receiving Unit 21, recited in col. 15, lines 54-65) that the portion has been successfully received without any uncorrectable errors ("relaying data that are successively transmitted", recited in col. 5, lines 30-45), and the estimating depends on the retransmission limit ("retransmission count", recited in col. 25, lines 30-48), **regarding claim 21**, the method ("provide data transmission of real-time", col. 2,

lines 14-18), wherein transmitting (fig. 1, Transmission unit 13, recited in col. 14, lines 66- col. 15, lines 9) the information portions ("data units", recited in col. 15, lines 10-178) depends on whether previous information portions were successfully transmitted (when the I frame becomes an error, video frames of P and B cannot be reproduced", recited in col. 14, lines 6-25) **regarding claim 22**, the method ("data transmission apparatus", recited in col. 2, lines 26-33), wherein the information portions ("packet units", recited in col. 15, lines 44-53) have different priorities ("lower and higher priorities", recited in fig. 6, col. 18, lines 63- col. 19, lines 5)and transmitting (fig. 1, Transmission unit 13, recited in col. 14, lines 66- col. 15, lines 9) the information portions ("data units", recited in col. 15, lines 10-178) depends on whether previous information portions ("frame portions", recited in col. 17, lines 48-58) with the same or higher priority ("high priority packets", recited in col. 17, lines 48-58) were successfully transmitted ("retransmission of packet with priorities higher than predetermined value", recited in col. 14, lines 51-59), **regarding claim 24**, the method ("provide data transmission of real-time", col. 2, lines 14-18), wherein the method ("provide data transmission of real-time", col. 2, lines 14-18) further comprising receiving a request ("retransmission request from terminal at receiving end", recited in col. 3, lines 50-62) from the receiver (fig. 2, Receiving Unit 21, recited in col. 15, lines 54-65) to initiate transmitting the information portions ("transmitted from the transmitter comprising of audio, video, text and header section", recited in col. 15, lines 10-17) to the receiver (fig. 2, Receiving Unit 21, recited in col. 15, lines 54-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

the features of Meggers et al. by using features as taught by Fukushima et al. in order to provide improvement in transmission quality (See col. 2, lines 26-53 for motivation).

9. **Claims 2-4, 6-8, 10, 12-17, 19-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meggers et al (US 6,728,270 B1) in view of Delp et al (US 6,028,843) in further view of Walpole et al (US 2003/0236904 A1).

Regarding claims 2-6, Meggers et al. discloses the method as recited in above paragraphs, **regarding claims 8, 15, 19, 25-26**, the method, wherein the estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7), determining ("calculated delivery time", recited in col. 12, lines 51-55) an estimated transfer time ("transmission time", recited in col. 8, lines 7-18) for transmitting ("transfer unit to transmit packet that admitted", recited in col. 4, lines 39-45) the information portion ("payload data packets", recited in col. 7, lines 1-5) and making the information portion ("payload data packets", recited in col. 7, lines 1-5) available to the receiver ("data packets reaching the destination at time interval", recited in col. 6, lines 38-47) as recited in **claim 8**, the method , wherein the estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) depends ("depends on throughput requirement", recited in col. 3, lines 14-25) on a type of media frame of the packet ("video frames, HTML", recited in col. 6, lines 48-57) as recited in **claim 13**, the estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) depends on the media frame portions ("video frames, HTML", recited in col. 6, lines 48-57) of the

information portion("payload data packets", recited in col. 7, lines 1-5) to be transmitted ("transfer unit to transmit packet that admitted", recited in col. 4, lines 39-45) as recited in **claim 15**, **regarding claim 19**, the method, wherein the estimating ("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7), determining ("calculated delivery time", recited in col. 12, lines 51-55) an estimated transfer time ("transmission time", recited in col. 8, lines 7-18), **regarding claims 25-26**, the method, wherein the estimating("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) includes multiple estimations ("calculation of delivery deadlines", recited in col. 8, lines 50-62), multiple estimations ("calculation of delivery deadlines", recited in col. 8, lines 50-62) during transmission of packets of a frame portion ("video frames, HTML", recited in col. 6, lines 48-57), whether all the packets can be transmitted by the transmitter in time to be made available to the receiver before the critical time (See paragraphs above), and the transmitting depends on the multiple estimations ("calculation of delivery deadlines", recited in col. 8, lines 50-62).

Meggers et al. discloses all the claimed limitation with the exception of the following features: **regarding claim 2**, the method, wherein the information portions are packets of media frame portions for a multimedia presentation, the presentation including multiple frame portions each frame portion including multiple high priority packets and multiple low priority packets, **regarding claim 3**, the method wherein the multiple frame portions each have a decoding time before which all the high priority packets of the frame portion need to be available to the receiver to decode the frame

portion in time for presentation at a predetermined presentation time of the frame portion, the decoding time and presentation time being relative to a playing time of the presentation, **regarding claim 4**, the method, wherein the low priority packets are used to enhance the frame portion during decoding when some but not all of the low priority packets are not available to the receiver at the critical time, **regarding claim 6,** the method, in which providing the information portions includes providing media frame portions and partitioning each frame portion into high priority information portions that are necessary to decode the frame portion and low priority information portions that are only needed to enhance the frame portions, **regarding claim 7**, the method of claim 1, wherein the information portions include high priority and low priority packets of media frame portions and all the high priority packets for one frame portion are provided before any low priority packets for the frame portion are provided, **regarding claim 10**, the method, wherein the receiver transmits an indication of the buffering limit to the transmitter, regarding claim 11, the method, wherein the estimating depends on a priority of the information portion being transmitted, **regarding claim 13**, the method, wherein the information portions are packets of media frame portions, **regarding claim 14**, the method, wherein: the information portions are portions of a video presentation encoded based on a group of pictures of different types of video frames including I-frames that are decoded independent of the decoding of any other frame, and P-frames that are decoded based on the decoding of the previous I or P-frame, and B-frames that are decoded based in the previous and the following I or P-frame; and the target time depends on the type of video frame, **regarding claim 15**, the method, wherein the

information portions are packets of media frame portions and the estimating depends on a decoding time of the media frame portion of the information portion to be transmitted., **regarding claim 19**, previously transmitted information, **regarding claim 25**, for all packets of the frame portion so that when it is estimated that some of the packets for the frame portions will be transmitted in time then the remaining packets for the frame portion are not transmitted, **regarding claim 26,** the transmitting of packets of the same or lower priority depends on the multiple estimations for all the packets of the frame portion of the priority so that when it is estimated that it is likely that some of the packets for the frame portion of the priority will not be transmitted in time, then the remaining packets for the frame portion for the same or lower priority are not transmitted.

However, Walpole et al in a similar field of endeavor discloses the following features: **regarding claim 2**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10) , wherein the information portions (fig. 2, "stream of data units", recited in paragraph 0051) are packets ("multimedia packets", recited in paragraph 0020) of media frame portions (fig. 3, Frame Portions, recited in paragraph 0057) for a multimedia presentation ("multimedia presentation", recited in paragraph 0020), the presentation ("multimedia presentation", recited in paragraph 0020), including multiple frame portions (fig. 3, Frame Portions, recited in paragraph 0057) each frame portion including multiple high priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) and multiple low priority packets ("priority packets",

recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062), **regarding claim 3**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the multiple frame portions (fig. 2, "stream of data units", recited in paragraph 0051) each have a decoding time (fig. 5-6, Play Time Window", recited in paragraph 0066), before which all the high priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) of the frame portion need to be available to the receiver (fig. 1, Client-side media decoder, recited in paragraph 0053) to decode (fig. 1, Media Decoder 148, recited in paragraph 0053) the frame portion in time ("SDU stream data units flown to decoder based on timestamps", recited in paragraph 0072) for presentation ("multimedia presentation", recited in paragraph 0020), at a predetermined presentation time (fig. 5-6, Play Time Window", recited in paragraph 0066) of the frame portion (fig. 5-6, "High to box 162", recited in paragraph 0068), the decoding time ("time unit", recited in paragraph 0068) and presentation time ("regulating the flow of stream data unit in relation to presentation time/playback time", recited in paragraphs 0079) being relative to a playing time (fig. 5-6, Play Time Window", recited in paragraph 0066) of the presentation ("multimedia presentation", recited in paragraph 0020), **regarding claim 4**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) are used to enhance ("impact on the video quality-B frames", recited in paragraph 0063, lines 1-11) the frame portion ("stream data units or SDU",

recited in paragraph 0079) during decoding when some but not all of the low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) are not available ("can not be decode unless previous is present", recited in paragraph 0059-0060) to the receiver (fig. 19, Client 406, recited in paragraph 0218) at the critical time ("timeline presentation" , recited in paragraph 0079) **regarding claim 6,** the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), in which providing ("providing of multimedia", recited in paragraph 0045) the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) includes providing ("providing of multimedia", recited in paragraph 0045) media frame portions ("multiple frames of video information", recited in paragraph 0066) and partitioning (fig. 12-13, partitioning of SPEG data, recited in paragraphs 0087-0088) each frame portion (fig. 2, Media Segment, recited in paragraph 0051) into high priority ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) information portions (fig. 1, QoS Mapper and Priority Progress Streamer, "assigns of priority", recited in paragraph 0049) that are necessary to decode (fig. 1, Client-side media decoder, recited in paragraph 0053) the frame portion (fig. 2, Media Segment, recited in paragraph 0051) and low priority information portions ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) that are only needed to enhance ("impact on the video quality-B frames", recited in paragraph 0063, lines 1-11) the frame portions ("stream data units or SDU", recited in paragraph 0079), **regarding claim 7**, the method ("priority progress media-streaming that provides

quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) include high priority ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) and low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) of media frame portions ("multiple frames of video information", recited in paragraph 0066) and all the high priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) for one frame portion ("SDU stream data units flown to decoder based on timestamps", recited in paragraph 0072) are provided before ("priority of stream data units", recited in paragraph 0067) any low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) for the frame portion ("SDU stream data units flown to decoder based on timestamps", recited in paragraph 0072) are provided, **regarding claim 10**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the receiver (fig. 4, Downstream adaptation buffer 184, recited in paragraph 0064) transmits ("receiving timing feedback from", recited in paragraph 0064) an indication ("receiving timing feedback from", recited in paragraph 0064) of the buffering limit ("receiving timing feedback", recited in paragraph 0064) to the transmitter (fig. 4, Upstream Adaptation Buffer 182, recited in paragraph 0064/Progress Streamer/progress regulator), **regarding claim 11**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the estimating depends on a

priority of the information portion being transmitted, **regarding claim 13**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are packets of media frame portions ("multiple frames of video information", recited in paragraph 0066), **regarding claim 14**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein: the information portions (fig. 2, "stream of data units", recited in paragraph 0051) are portions of a video presentation ("video presentation", recited in paragraph 0020) encoded based on a group of pictures (fig. 3, MPEG group of pictures", recited in paragraph 0057) of different types of video frames (fig. 3, MPEG video frames, recited in paragraph 0058) including I-frames (fig. 3, I Frames, recited in paragraph 0058-0062) are decoded independent of the decoding of any other frame (fig. 3, I Frames that can be decoded independently", recited in paragraphs 0058-0062), and P-frames (fig. 3, P Frames, recited in paragraph 0058-0062) that are decoded based on the decoding of the previous I or P-frame ("depends on previous I or P frames", recited in paragraph 0059), and B-frames (fig. 3, B Frames, recited in paragraphs 0058-0062) that are decoded based in the previous and the following I or P-frame ("depends on previous I or P frames", recited in paragraph 0060); and the target time (fig. 5-6, Play Time Window", recited in paragraph 0066) depends on the type of video frame ("SDU stream data units flown to decoder based on timestamps", recited in paragraph 0072), **regarding claim 15**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in

abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are packets of media frame portions (fig. 3, MPEG video frames, recited in paragraph 0058), a decoding time ("media decoder and time stamp", recited in paragraph 0072) of the media frame portion ("multiple frames of video information", recited in paragraph 0066) of the information portion to be transmitted (see, "depends on relationships between the various frame portions, recited in paragraphs 0058-0062), **regarding claim 16**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are packets of media frame portions ("stream data units", recited in paragraph 0051) of a presentation ("multimedia presentation", recited in paragraph 0020), multiple media frame portions ("multiple frames of video information", recited in paragraph 0066) each having a decoding time (fig. Time Stamp, recited in paragraph 0051) when packets of the frame portion have to be available at a decoder (fig. 1, Media Decoder 148, recited in paragraph 0053) of the receiver (fig. 1, Client-side, recited in paragraph 0053) for decoding in time ("SDU stream data units flown to decoder based on timestamps", recited in paragraph 0072) for presentation at a predetermined presentation time (fig. 5-6, Play Time Window", recited in paragraph 0066) of the frame portion ("SDU stream data units flown to decoder based on timestamps", recited in paragraph 0072), **regarding claim 19**, previously transmitted information portions (see, "depends on relationships between the various frame portions, recited in paragraphs 0058-0062) **regarding claim 20**, the

method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are high priority ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) and low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) of media frame portions and transmitting all the high priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) for one frame portion begins before the beginning of transmitting the low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) for the frame portion, **regarding claim 21**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein transmitting ("Priority Progress Streamer sending stream data units", recited in paragraph 0050) the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) depends on whether previous information portions were successfully transmitted, **regarding claim 22**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) have different priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066) and transmitting ("Priority Progress Streamer sending stream data units", recited in paragraph 0050) the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) depends on whether previous (see, "depends on

relationships between the various frame portions, recited in paragraphs 0058-0062) information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) with the same or higher priority ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) were successfully transmitted, **regarding claim 23**, the method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are high priority and low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) of media frame portions and transmitting the high priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) depends on whether previous high priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) for the same frame portion have been transmitted and transmitting the low priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) depends on whether previous high priority ("priority packets", recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) and previous low priority packets for the same frame portion have been transmitted (see, "depends on relationships between the various frame portions, recited in paragraphs 0058-0062), **regarding claim 25**, for all packets of the frame portion so that when it is estimated that some of the packets for the frame portions will be transmitted in time then the remaining packets for the frame portion are not transmitted, **regarding claim 26**, the method ("priority progress media-

streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) for a frame include information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) having different priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066), **regarding claim 25**, for all packets of the frame portion (fig. 3, MPEG video frames, recited in paragraph 0058), so that when it is estimated that some of the packets for the frame portions will be transmitted in time then the remaining packets for the frame portion are not transmitted (See "frame depends-on relations in MPEG", recited in paragraphs 0058-0062) **regarding claim 26,** the transmitting of packets of the same or lower priority depends on the multiple estimations for all the packets of the frame portion of the priority so that when it is estimated that it is likely that some of the packets for the frame portion of the priority will not be transmitted in time, then the remaining packets for the frame portion for the same or lower priority are not transmitted (See "frame depends-on relations in MPEG", recited in paragraphs 0058-0062). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Meggers et al. with Delp et al. by using features as taught by Walpole et al in order to provide quality-adaptive transmission of multimedia data (See paragraphs 0019-0020 for motivation).

Meggers et al and Walpole et al. discloses all the claimed limitation with the exception of being silent with regard to the following features: However, Delp et al. in a similar field of endeavor discloses the following features: **regarding claim 8**, the

method ("method for scheduling", recited in col. 4, lines 60-67), wherein: the estimating includes determining a target time ("calculation of target transmission time", recited in col. 5, lines 1-14) when one information portion ("data streams", recited in col. 5, lines 1-14) needs to be available to the receiver (fig. 1, Outbound Cell Scheduler 102, recited in col. 6, lines 30-55) and determining an estimated transfer time ("calculation of time slot", recited in col. 5, lines 8-14) for transmitting the information portion ("transmission of data cell", recited in col. 5, lines 22-27) and making the information portion ("transmission of data streams at the earliest deadlines", recited in col. 5, lines 1-14) available to the receiver (fig. 1, Outbound Cell Scheduler 102, recited in col. 6, lines 30-55), the estimating ("computing deadlines for the connections", recited in col. 7, lines 34-46) includes determining ("calculation of target transmission time", recited in col. 5, lines 1-14) whether the target time exceeds ("comparing time slot", recited in col. 5, lines 22-38) the sum of the estimated transfer time plus the current time of the transmission ("old timestamp, current time stamp and time slot calculation", recited in col. 11, lines 1-23); and the information portion ("data streams", recited in col. 5, lines 1-14) is transmitted ("transmission of packets at the deadline", recited in col. 7, lines 57-62) depending on the determination ("computing deadlines for the connections", recited in col. 7, lines 34-46), **regarding claim 12**, the target time ("calculation of target transmission time", recited in col. 5, lines 1-14) depends on a predetermined delay tolerance (fig. 2B, MAX Delay 230, recited in col. 8, lines 25-35, "guaranteed delay', recited in col. 9, lines 5-13) that is larger ("maximum delay", recited in col. 11, lines 1-22) for the high priority packets ("classification of connections by delay bounds", recited

in col. 4, lines 60-65, "data are processed according to the timing wheel priority", recited in col. 12, lines 23-56) than for the low priority packets ("data are processed according to the timing wheel priority", recited in col. 12, lines 23-56) so that the high priority packets are more likely to be received by the receiver (fig. 1, Outbound Cell Scheduler 102, recited in col. 6, lines 30-55), than the low priority packets (fig. 9, Priority levels of cell scheduler, recited in col. 11, lines 40-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Meggers et al. with Walpole et al. by using features as taught by Delp et al. in order to provide scheduling of data streams at earliest delivery deadlines (See Col. 4, lines 60-65)

10. **Claims 30-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Meggers et al (US 6,728,270 B1) in view of Walpole et al (US 2003/0236904 A1).

Meggers et al discloses the method the method comprising of the transmitter, the estimating as recited in above paragraph. However, Meggers is silent with regard to the following features: **regarding claim 30**, the transmitter further comprises means for receiving an indication of the size of buffering from the receiver; and the estimating depends on the indication of the size of buffering in the receiver, **regarding claim 31**, the transmitter further comprises means for determining a decoding time of the information portions; **regarding claim 32**, the means for providing information portions includes means for partitioning information into information portions having different priorities; and the estimating depends on the priorities of the information portions.

However, Walpole et al. in a similar field of endeavor discloses the following features: **regarding claim 30**, the transmitter (fig. 1, Server Streaming side 102, recited in paragraph 0047, fig. 4, Upstream Adaptation Buffer 182, recited in paragraph 0064) further comprises means for receiving an indication ("timing feedback", recited in paragraph 0064) of the size ("timing feedback", recited in paragraph 0064) of buffering from the receiver (fig. 4, Downstream adaptation buffer 184, recited in paragraph 0064, fig. 19, Client 406, recited in paragraph 0218 or Client-side 104, recited in paragraph 0047), **regarding claim 31,** the transmitter (fig. 1, Server Streaming side 102, recited in paragraph 0047, fig. 4, Upstream Adaptation Buffer 182, recited in paragraph 0064) further comprises means for determining ("QoS mapper determines", recited in paragraph 0109, 0104-0105)a decoding time (fig. Time Stamp, recited in paragraph 0051) of the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19), **regarding claim 32**, : the means ("providing of multimedia", recited in paragraph 0045) for providing information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) includes means for partitioning information(fig. 12-13, partitioning of SPEG data, recited in paragraphs 0087-0088) into information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) having different priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066). Therefore, it would have been obvious to one of ordinary skill in the art at the time the information was made to modify the features of Meggers et al. by using features as taught by Walpole et al. in order to provide quality-adaptive transmission of multimedia data (See paragraphs 0019-0020 for motivation).

11. **Claims 33-35, 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Walpole et al (US 2003/0236904 A1).

Regarding claim 27, Walpole et al. discloses a method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10) comprising: separating (fig. 12-13, Partitioning of MPEG data, recited in paragraph 0087-0088) for a performance ("multimedia presentation", recited in paragraph 0020, "video presentation", recited in paragraph 0020) into multiple media streams ("multiple frames of video information", recited in paragraph 0066) with different priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066) for transmission ("data transmissions", recited in paragraph 0219) over a network (fig. 19, Network, recited in paragraph 0214) having a variable conditions ("dynamic variations and network loads", recited in paragraph 0208), the media stream (fig. 2, Application data unit with Time slot assigned, recited in paragraph 0051) having a predetermined schedule ("predefined time period", recited in paragraph 0051); determining (fig. 1, QoS Mapper 114,"performs dynamic quality of service as part of media stream delivery", recited in paragraph 0104-0105, " "computing QoS presentation", recited in paragraph 0108, lines 1-7) whether to transmit portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) of the multiple media streams ("multiple frames of video information", recited in paragraph 0066) depending on the priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066) and on the network (fig. 19, Network, recited in paragraph 0214) conditions ("dynamic variations and network loads", recited

in paragraph 0208), so that the perceived quality ("quality of adaptation vary to accommodate clients", recited in paragraph 0055) of the performance ("multimedia presentation", recited in paragraph 0020) is increased relative ("manipulation of adaptation window for stable quality", recited in paragraph 0082) to attempting to transmit all of the multiple media streams ("multiple frames of video information", recited in paragraph 0066); and transmitting the portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) of the multiple media streams ("multiple frames of video information", recited in paragraph 0066) depending on the determination (fig. 1, QoS Mapper 114,"performs dynamic quality of service as part of media stream delivery", recited in paragraph 0104-0105, " "computing QoS presentation", recited in paragraph 0108, lines 1-7).

Regarding 33, Walpole et al. discloses a receiver (fig. 1, Client-side media 104, recited in paragraph 0053) comprising: means for requesting ("reorders the stream data units according to time stamps", recited in paragraph 0071) a transmitter (fig. 1, Progress Streamer 120, "transmits of stream data units to client", recited in paragraph 0055) to transmit information portions ("the stream data units are flown from the upstream buffer to the receiver", recited in paragraphs 0071-0072) that have to be available ("received of stream data units and re-ordered in time sequence based upon time stamps", recited in paragraph 0072) to the receiver (fig. 1, Client-side media 104, recited in paragraph 0053) at critical times ("received of stream data units and re-ordered in time sequence based upon time stamps", recited in paragraph 0072); means for buffering (fig. 4, Downstream Adaptation Buffer 184, recited in paragraph 0064)

information portions ("collects priority labeled-stream", recited in paragraph 0071) that arrive before the critical time ("received of stream data units and re-ordered in time sequence based upon time stamps", recited in paragraph 0072); and means for transmitting ("receiving timing feedback from", recited in paragraph 0064) an indication of the size of the buffering ("receiving timing feedback from", recited in paragraph 0064, fig. 4, Downstream Adaptation Buffer 184) to the transmitter (fig. 1, Progress Streamer 120, "transmits of stream data units to client", recited in paragraph 0055)

Regarding claim 34, the receiver (fig. 1, Client-side media 104, recited in paragraph 0053), wherein: the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are packets ("stream of data units/application data units", recited in paragraph 0049) for encoded media frames (fig. 3, MPEG encoded frames, recited in paragraph 0057) each of multiple media frames ("multiple frames of video information", recited in paragraph 0066) containing multiple packets (fig. 2, Application data units, recited in paragraph 0051); the receiver (fig. 1, Client-side media 104, recited in paragraph 0053) further comprises a buffer (fig. 4, Downstream Adaptation Buffer 184, recited in paragraph 0064) for storing the packets ("collects priority labeled-stream", recited in paragraph 0071) and means for decoding (fig. 1, Media Decoder 148, recited in paragraph 0053) the packets at the critical time; all the packets ("stream data units", recited in paragraph 0066) for a frame (fig. 3, Frame I, recited in paragraph 0057) contain the same timestamp (fig. 5-6, time units, recited in paragraph 0066); and all the packets ("stream data units", recited in paragraph 0066) for a frame (fig. 3, Frame I, recited in paragraph 0057) are identified based on the same

timestamp (fig. 2, Time Stamp, recited in paragraph 0051) and transferred together to the decoder ("stream data units flown to the media decoder", recited in paragraph 0071-0072).

Regarding claim 35, Walpole et al. discloses the receive (fig. 1, Client-side media 104, recited in paragraph 0053), wherein: the information portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) are packets for encoded media frames, each of multiple media frames ("multiple frames of video information", recited in paragraph 0066) containing multiple packets ; the receiver (fig. 1, Client-side media 104, recited in paragraph 0053) further comprises a buffer (fig. 4, Downstream Adaptation Buffer 184, recited in paragraph 0064) for storing the packets ("collects priority labeled-stream", recited in paragraph 0071) and means for decoding the packets (fig. 1, Media Decoder 148, recited in paragraph 0053) at the critical time ("received of stream data units and re-ordered in time sequence based upon time stamps", recited in paragraph 0072); the packets include high priority packets (fig. 10A-10C, Prioritization of packets-High priority packets, recited in paragraphs 0075, 0078) and low priority packets (fig. 10A-10C, Prioritization of packets-Low priority packets, recited in paragraphs 0075, 0078) ; all the packets contain an indication of their priority (fig. 10A-10C, Low and high priority, recited in paragraphs 0075-0078); the high priority packets (fig. 10A-10C, Prioritization of packets-High priority packets, recited in paragraphs 0075, 0078) for a frame are received (fig. 7-8, Received of Stream data units in priority order", recited in paragraphs 0072-fig. 7-8 clearly show that high data packets are first) before the low priority packets (fig. 10A-10C, Prioritization of packets-

Low priority packets, recited in paragraphs 0075, 0078) for the frame are received (fig. 7-8, Received of Stream data units in priority order", recited in paragraphs 0072); and all the packets (fig. 10A-10C, plurality of packet types, recited in paragraph 0075, 0078) for a frame (fig. 10 A, Frame 194, recited in paragraph 0075) are identified by the changes (fig. 10A-10C, "assignment of different priorities", recited in paragraphs 0075-0078) in the indication of packet priorities (fig. 10A-10C, Low and high priority, recited in paragraphs 0075-0078); and transferred together to the decoder ("stream data units flown to the media decoder", recited in paragraph 0071-0072).

Regarding claim 27, Walpole et al. discloses a method ("priority progress media-streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10) comprising: separating (fig. 12-13, Partitioning of MPEG data, recited in paragraph 0087-0088) for a performance ("multimedia presentation", recited in paragraph 0020, "video presentation", recited in paragraph 0020) into multiple media streams ("multiple frames of video information", recited in paragraph 0066) with different priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066) for transmission ("data transmissions", recited in paragraph 0219) over a network (fig. 19, Network, recited in paragraph 0214) having a variable conditions ("dynamic variations and network loads", recited in paragraph 0208), the media stream (fig. 2, Application data unit with Time slot assigned, recited in paragraph 0051) having a predetermined schedule ("predefined time period", recited in paragraph 0051); determining (fig. 1, QoS Mapper 114,"performs dynamic quality of service as part of media stream delivery", recited in paragraph 0104-0105, " "computing QoS presentation", recited in paragraph

0108, lines 1-7) whether to transmit ("sending of stream data units", recited in paragraph 0050) portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) of the multiple media streams ("multiple frames of video information", recited in paragraph 0066) depending on the priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066) and on the network (fig. 19, Network, recited in paragraph 0214) conditions ("dynamic variations and network loads", recited in paragraph 0208), so that the perceived quality ("quality of adaptation vary to accommodate clients", recited in paragraph 0055) of the performance ("multimedia presentation", recited in paragraph 0020) is increased relative ("manipulation of adaptation window for stable quality", recited in paragraph 0082) to attempting to transmit ("sending of stream data units", recited in paragraph 0050) all of the multiple media streams ("multiple frames of video information", recited in paragraph 0066); and transmitting the portions ("multiple segments of information", recited in paragraph 0066, lines 10-19) of the multiple media streams ("multiple frames of video information", recited in paragraph 0066) depending on the determination (fig. 1, QoS Mapper 114,"performs dynamic quality of service as part of media stream delivery", recited in paragraph 0104-0105, " "computing QoS presentation", recited in paragraph 0108, lines 1-7).

12. **Claim 28** is rejected under 35 U.S.C. 103(a) as being unpatentable over Walpole et al (US 2003/0236904 A1) in view of Chen et al (US 6,658,019 B1).

Regarding claim 28, Walpole et al. discloses all the claimed limitation with the exception of being silent with regard to the following features: the method, wherein the network is a wireless network and packets are transmitted serially, and each packet is transmitted and retransmitted until an acknowledgement is received or a retransmission limit is reached.

However, Chen et al (US 6,658,019 B1) in a similar field of endeavor of endeavor discloses the following features: **regarding claim 28**, the method ("wireless transmission method for transmitting video stream", recited in abstract, lines 1-7) wherein the network is a wireless network (fig. 1, Wireless Network, recited in col. 2, lines 14-21) and packets are transmitted serially ("transmission of video stream", recited in col. 2, lines 14-21), and each packet is transmitted ("ARQ of sensitive video data", recited in col. 2, lines 25-40) and retransmitted (fig. 1, Video Stream Rescheduling S3, recited in col. 2, lines 14-21) until an acknowledgement is received or a retransmission (limit is reached ("maximum retransmission limit", recited in col. 3, lines 6-28). Therefore, it would been obvious to one of ordinary skill in the art at the time the invention was made to modify the features of Walpole et al. by using features as taught by Chen et al. in order to provide error protection for time sensitive data (See col. 1, lines 41-55 for motivation).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gu et al (US 7,253,831 B2), Ariel et al (US 2002/0146074 A1), Delp et al (US 5,844,890), Branstad et al (US 5,537,408), Walpole et al (US

2003/0233464 A1), Tan et al (US 6,917,984 B1) are cited to show methods and systems related to the claimed invention.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Candal Elpenord whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CE

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER